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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/749,978	12/30/2003	Tetsuo Minaai	KIT-362 US	9689
24972	7590	09/23/2005	EXAMINER	
FULBRIGHT & JAWORSKI, LLP 666 FIFTH AVE NEW YORK, NY 10103-3198			LONEY, DONALD J	
			ART UNIT	PAPER NUMBER
			1772	
DATE MAILED: 09/23/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/749,978

Applicant(s)

MINAAI ET AL.

Examiner

Donald Loney

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 4-9 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-9 and 14-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/10/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: Pages 2 and 4 of the Specification contain references to claim numbers. Since claim numbers and/or limitations are subject to change during prosecution the text thereof should be substituted therefore, in order to not have reference to claims in the Specification.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang et al (6399169).

Wang et al discloses a vacuum glazing unit that contains a seal of solder glass 45 (i.e. low temperature melting glass) wherein the seal bulges into the gap between the panes. Refer to figures 6-8, column 5, lines 19 and 20 and column 7, lines 20-35. The examiner has cited US Pat. No. 4748137 to show solder glass is a low temperature

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melting glass (column 3, lines 3-30). This rejection is being applied since the applicants' effective filing date is the filing date of this US application per MPEP 706.02(V) [C] since the applicant claimed priority under 35 USC 119 and 365(b). This reference could be overcome by the provisions set forth in MPEP 706.02(b).

4. Claims 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Shukuri et al (6387460).

Shukuri et al discloses a vacuum glazing unit sealed with a low temperature glass wherein the seal S bulges into the gap between the glass sheets. Refer to figures 29-31 and column 15, lines 17-24 and column 16, line 37 through column 17, line 59.

5. Claims 4-9 are rejected under 35 U.S.C. 102(a) as being anticipated by any of Domi et al (2003/0108692), Futagami et al (2003/0108693) or Futagami et al (6663923).

All of the above disclose a vacuum glazing unit sealed with a low temperature glass wherein the seal bulges into the gap between the glass sheets. Refer to figure 3 in 2003/0108692. Refer to figure 2 in 2003/0108693. Refer to figure 2 in US Pat. No. 6663923.

6. Claims 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Demars (5643644).

Demars discloses two glass sheets 2,3 sealed with solder glass 6 which softens at a temperature below that of glass (i.e. low temperature) in order to form a vacuum insulated glazing. The seal 6 in figures 1 and 3 clearly appear to at least somewhat bulge into the gap between the sheets. This seal material can be made of the same low temperature solder glass as the ball 8. Refer to column 4, lines 19-27, column 5, lines

22-34 and 55-65 and column 6, lines 1-3. Column 5, line 61 through column 6, line 3 disclose that the seal material undergoes a heat treatment so that they maintain their shapes. Claims 8 and 9 are met by the vacuum disclosure of the prior art.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danner in view of Demars.

Danner teaches two glass sheets 2,3 sealed with a glass material 4 along the edge thereof wherein the seal bulges into the gap formed between the panes. Refer to figure 3 and page 1, column 1 lines 20-54. This reference is being applied since the applicants' recitation as to a "low temperature melting glass" is relative due to the relative term "low" and does not distinguish from Danner melting glass seal.

Danner does fail to specifically teach the unit as being under vacuum condition.

Demars discloses that it is known to form a vacuum in the inner space of a glazing unit in order to provide good insulating properties. Refer to column 1, lines 22-27.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to Danner to form a vacuum in the inner space of the insulating glazing unit, as taught by Demars, in order to provide better insulating

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properties thereto motivated by the fact that Danner also teaches to form units with insulating properties and vacuum improves said properties.

9. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over any of Wang et al (6399169), Domi et al (2003/0108692), Futagami et al (2003/0108693), Futagami et al (6663923) or Demars (5643644).

The primary reference teaches the invention substantially as recited except for the specific viscosity of the low temperature melting glass. They do teach to use low temperature melting glass in general. See the 35 U.S.C. 102 rejection above.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the primary references to use a low temperature glass containing the recited viscosity to form an article of desired properties for a particular application motivated by the fact the primary references do teach to use a low temperature melting glass for the seal.

### ***Response to Arguments***

10. Applicant's arguments filed June 27, 2005 have been fully considered but they are not persuasive. The applicant argues that the process steps employed to prepare the article distinguish over Demars. It must be noted that it is the patentability of the product that is in issue not the steps employed to prepare the product. See *In re Brown*, 173 USPQ 685 and *In re Fessmann*, 180 USPQ 324. Demars still reads upon the recited structure of the product claim (i.e. a vacuum glazing wherein the low temperature glass seal bulges into the gap between the sheets as discussed above).

***Conclusion***

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

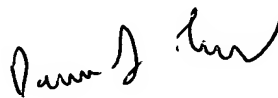
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Loney whose telephone number is (571) 272-1493. The examiner can normally be reached on Mon, Tues, Thurs and Fri. 8AM-4PM, flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Donald Loney  
Primary Examiner  
Art Unit 1772

DJL:D.Loney  
09/17/05